AMENDMENT UNDER 37 C.F.R. § 1.111

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A method for proliferating terminal differentiated cells comprising: introducing a D-type cyclin and a cyclin dependent kinase into the nucleus of terminal differentiated cells, and cultivating or holding said cells, wherein said cyclin dependent kinase is CDK4 or CDK6.

2. (Currently Amended) A method for proliferating terminal differentiated cells comprising: adding a nucleotide sequences coding for a nuclear localization signal to ~~lease~~ at least one ~~of a~~ D-type cyclin gene and a cyclin dependent kinase gene; and introducing each of said genes to terminal differentiated cells in vitro, and then cultivating said cells, or introducing each of said genes directly to terminal differentiated cells in vivo, wherein said cyclin dependent kinase is CDK4 or CDK6.

3. (Cancelled) ~~The method of claim 1 or 2, wherein said cyclin activates a mammalian CDK4 or CDK6~~.

4. (Currently Amended) The method of claim 1 or 2, wherein said cyclin dependent kinase is activated by a mammalian cyclin.

5. (Original) The method of claim 1 or 2, wherein said terminal differentiated cells are cardiomyocytes, nerve cells, kidney cells, or pancreatic cells.

6. (Original) The method of claim 2, wherein said cyclin gene and said cyclin dependent kinase gene are transferred to the terminal differentiated cells using an adenovirus vector.

7. (Withdrawn) A recombinant vector comprising a cyclin gene comprising a nucleotide sequence coding for a nuclear localization signal.

8. (Withdrawn) A recombinant vector comprising a cyclin gene and a cyclin dependent kinase gene, wherein at least one of said genes is attached with a nucleotide sequence coding for a nuclear localization signal.

9. (Withdrawn) The recombinant vector of claim 7 or 8, wherein said cyclin is a cyclin that is capable of activating a mammalian CDK4 or CDK6.

10. (Withdrawn) The recombinant vector of claim 7 or 8, wherein said cyclin dependent kinase is a cyclin dependent kinase that is activated by cyclin D1, D2, or D3.

11. (Withdrawn) The recombinant vector of claim 7 or 8, further comprising an adenovirus vector.

12. (Withdrawn— Currently Amended) An isolated mammalian cell or tissue that was proliferated by the method of claim 1 or 2.

13. (Withdrawn— Currently Amended) A pharmaceutical composition for proliferating terminal differentiated cells or tissues, comprising an effective amount of the recombinant vector of claim 7, 8, or 15.

14. (Withdrawn) A method for treating cardiopathy in a human patient comprising introducing the pharmaceutical composition of claim 13 into the myocardium of the patient, and proliferating a cardiomyocite in the patient.

15. (Withdrawn) A recombinant vector comprising a cyclin dependent kinase gene comprising a nucleotide coding for a nuclear localization signal.

16. (Original) The method of claim 2, wherein said gene comprising said nucleotide sequence is introduced to the terminal differentiated cells in vitro, and cultivating said cells.

17. (Original) The method of claim 2, wherein said genes comprising said nucleotide sequence is introduced to the terminal differentiated cells in vivo.

18. (New) The method of claim 1 or 2, wherein said cyclin activates CDK4.

19. (New) The method of claim 1 or 2, wherein said cyclin activates CDK6.